4. (Reiterated) The method of claim 1, further comprising detecting the expression of at least one other pathway gene in the cell.

5. (Reiterated) The method of claim 1, wherein said pathway gene is a biosynthetic pathway gene.

6. (Reiterated) The method of claim 5, wherein said biosynthetic pathway gene is a primary metabolite pathway gene.

7. (Reiterated) The method of claim 5, wherein said biosynthetic pathway gene is a secondary metabolite pathway gene.

8. (Reiterated) The method of claim 7, wherein said secondary metabolite pathway gene is a terpenoid pathway gene.

9. (Reiterated) The method of claim 7, wherein said secondary metabolite pathway gene is an alkaloid pathway gene.

10. (Reiterated) The method of claim 1, wherein said cloned test transcription factor polynucleotide is from a plant.

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11. (Twice Amended) The method of claim 1, wherein said cloned test transcription factor polynucleotide is expressed transiently in the plant cell.

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13. (Amended) The method of claim 1, wherein said plant promoter operably linked to a reporter gene is transiently transfected into the plant cell.

14. (Reiterated) The method of claim 1, wherein said reporter gene is GUS.

15. (Reiterated) The method of claim 1, wherein said promoter is the promoter of a biosynthetic pathway gene of a plant that produces secondary metabolites.

16. (Reiterated) The method of claim 8, wherein said terpenoid pathway gene is from a species selected from the group consisting of *Mentha* and *Taxus*.

17. (Reiterated) The method of claim 8, wherein said terpenoid pathway gene is selected from the group consisting of limonene synthase and taxadiene synthase.

18. (Reiterated) The method of claim 1, further comprising deconvoluting the pool of cloned test transcription factor polynucleotides to identify the minimum number of cloned test transcription factor polynucleotides necessary to detect expression from said pathway gene promoter.

33. (Thrice Amended) A method of determining whether two or more members of a pool of cloned test transcription factor polynucleotides are required for expression from a pathway gene promoter, the method comprising: collecting a pool of cloned test transcription factor polynucleotides; introducing into a plant cell a nucleic acid comprising a biosynthetic pathway gene promoter operably linked to a reporter gene; introducing into the plant cell the pool of cloned test transcription factor polynucleotides; and detecting expression from said biosynthetic pathway gene promoter in the plant cell, thereby determining whether two or more members of the cloned test transcription factor polynucleotide pool are required for expression from said promoter.

34. (Reiterated) The method of claim 33, further comprising deconvoluting the pool of cloned test transcription factor polynucleotides to identify the minimum number of cloned test transcription factor polynucleotides necessary to detect expression from said pathway gene promoter.

35. (Reiterated) The method of claim 33, wherein a member of the cloned test transcription factor polynucleotide pool is selected on the basis of structural similarity to a known transcription factor for a pathway gene.

36. (Reiterated) The method of claim 33, wherein a member of the cloned test transcription factor polynucleotide pool is selected without regard to structural similarity to a known transcription factor for a pathway gene.

37. (Reiterated) The method of claim 33, further comprising detecting the expression of at least one other pathway gene in the cell.

38. (Reiterated) The method of claim 33, wherein said pathway gene is a biosynthetic pathway gene.

39. (Reiterated) The method of claim 38, wherein said biosynthetic pathway gene is a primary

metabolite pathway gene.

40. (Reiterated) The method of claim 38, wherein said biosynthetic pathway gene is a secondary metabolite pathway gene.

41. (Reiterated) The method of claim 40, wherein said secondary metabolite pathway gene is a terpenoid pathway gene.

42. (Reiterated) The method of claim 40, wherein said secondary metabolite pathway gene is an alkaloid pathway gene.

43. (Reiterated) The method of claim 33, wherein said cloned test transcription factor polynucleotide is from a plant.

44. (Reiterated) The method of claim 33, wherein said cloned test transcription factor polynucleotide is expressed transiently in the cell.

48. (Reiterated) The method of claim 33, wherein said promoter is the promoter of a biosynthetic pathway gene of a plant that produces secondary metabolites.

49. (Reiterated) The method of claim 41, wherein said terpenoid pathway gene is from a species selected from the group consisting of *Mentha* and *Taxus*.

50. (Reiterated) The method of claim 41, wherein said terpenoid pathway gene is selected from the group consisting of limonene synthase and taxadiene synthase.